­



Politecnico di Milano

A.A. 2015-2016

Software Engineering 2: “MyTaxi”

Project Reporting

Manzi Giuseppe (mat. 854470) &

Nicolini Alessandro (mat. 858858)

CONTENTS

[1. Introduction 4](#_Toc440978579)

[1.1 Revision History 4](#_Toc440978580)

[1.2 Purpose and Scope 4](#_Toc440978581)

[1.3 List of Reference Document 4](#_Toc440978582)

[2. Integration Strategy 4](#_Toc440978583)

[2.1 Entry Criteria 4](#_Toc440978584)

[2.2 Element to be Integrated 4](#_Toc440978585)

[2.3 Integration Testing Strategy 5](#_Toc440978586)

[2.4 Sequence of Component 5](#_Toc440978587)

[2.4.1 Software Integration Sequence 6](#_Toc440978588)

[3. Individual Steps and Test Description 7](#_Toc440978589)

[3.1 Integration test case I1 7](#_Toc440978590)

[3.2 Integration test case I2 7](#_Toc440978591)

[3.3 Integration test case I3 7](#_Toc440978592)

[3.4 Integration test case I4 8](#_Toc440978593)

[3.5 Integration test case I5 8](#_Toc440978594)

[3.6 Integration test case I6 8](#_Toc440978595)

[3.7 Integration test case I7 9](#_Toc440978596)

[3.8 Integration test case I8 9](#_Toc440978597)

[4. Tools and Test Equipment Required 10](#_Toc440978598)

[5. Program Stubs and Test Data Required 10](#_Toc440978599)

# 1. Introduction

# 2. Functional Point

## 2.1 Introduction

Calculated in the first phases of the development process, Functional Point is a way to estimate the effort to develop a software product depends on the RASD functionalities of our “MyTaxy”.

The functionalities has been groped in:

* **Internal Logical File (ILF):** homogeneous set of data used and managed by our application (User or Past Request File in the DataBase)
* **External Interface File (EIF):** data used by our application but generated and maintained by other applications, in our project Google Maps and SMS
* **External Input:** elementary operation to elaborate data coming form the external environment such as login, insert user, position, request and reservation
* **External Output**: elementary operation that generates data for the external environment, it usually includes the elaboration of data from logic files such as Notification, request detail ecc
* **External Inquiry:** Elementary operation that involves input and output without significant elaboration of data from logic files

The following table outline the number of Functional Point based on funtionality

and relative complexity:



## 2.2 Internal Logic Files (ILF)

The application included in ILF store the information:

* Users (simple structure)
* PastRequests (simple structure)

The total amount of FPs is 14 = 7 + 7.

## 2.3 External Interface File (EIF)

For the interaction Api are:

* SMS sending (simple structure)
* Google Maps (Medium structure)

The total amount of FPs is 5 + 7 = **12**.

## 2.4 External Inputs

The application interacts with the user:

* Login/logout (simple input)
* Sign up (simple input)
* Position (simple input)
* Create Request (simple input)
* Create Reservation (medium input)
* Modify Reservation (medium input)
* Delete Reservation (medium input)
* Set Taxi driver state (simple input)
* Confirm Costumer’s presence (simple input)
* Decline a ride (simple input)

The total amount of FPs is 3+3+3+3+4+4+4+3+3+3 = **33**.

## 2.5 External Output:

* Notification of Request for users and taxi (medium output)
* Notification of Reservation (medium output)
* Notification of changing zone (high output)

The total amount of FPs is 5+5+7 = **17.**

## 2.6 External Inquiries:

* Information Recap in PRA (medium operation)

The total amount of FPs is **4**

Detailed computation using excel:



**TOTAL = 80 FPs**

This value can be used as a basis to estimate the size of the project in KLOC and

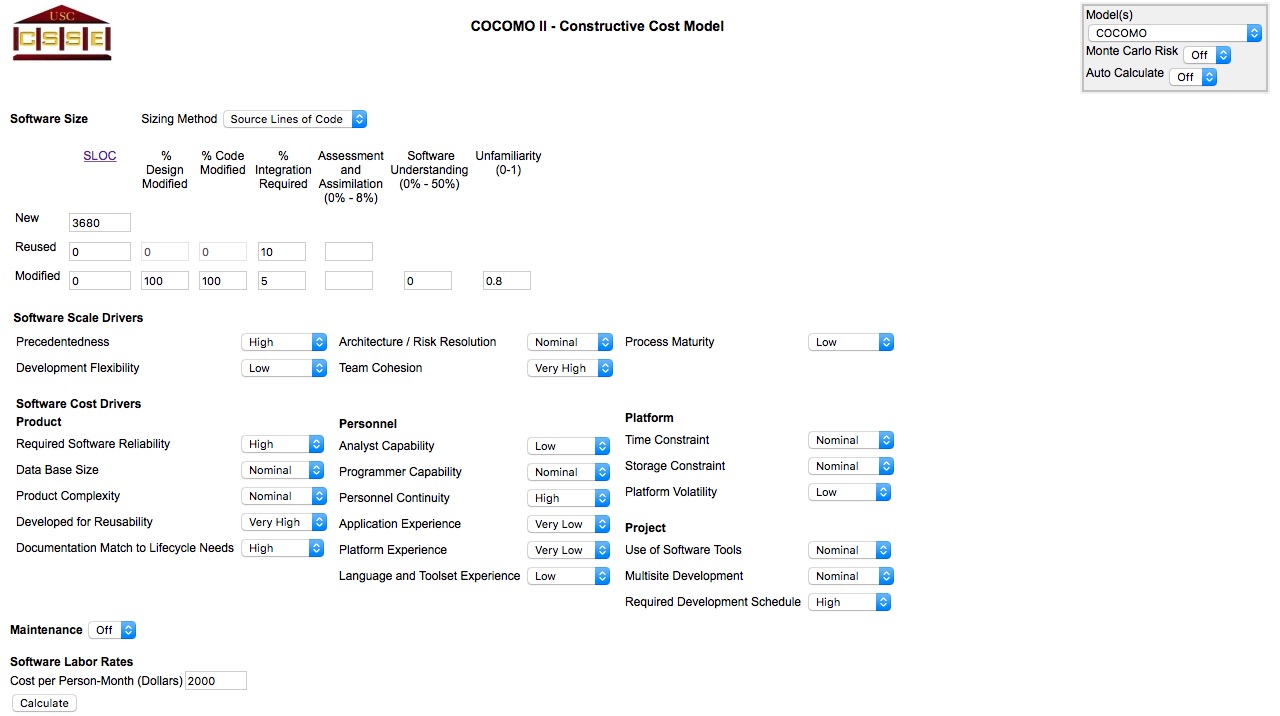
then use another approach such as COCOMO to estimate the effort.

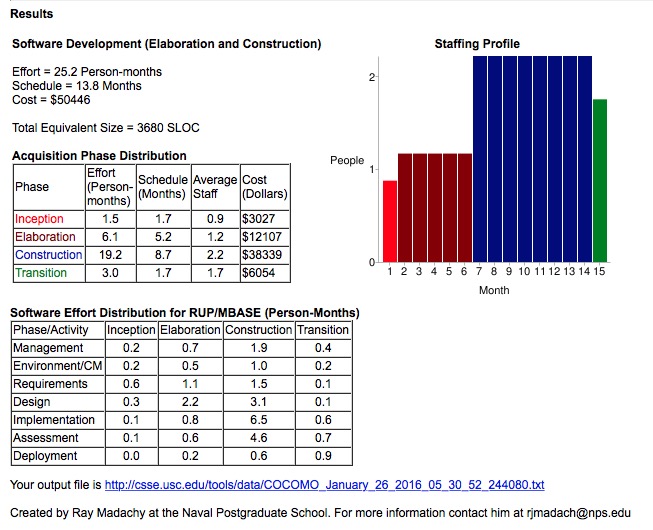
# 

# 3. COCOMO approach

To pass from FP to SLOC we use an average conversion factor of 46 as we see in the table described at http://www.qsm.com/resources/function-point-languages-table, an updated

version that adds J2EE of the table included in official manual.





# 4. Schedule

# 5. Allocated Resources

Here are the total amount of hour for all the assignment of our project:

* Requirements Analysis and Specifications Document:
  + Giuseppe Manzi: 40 hours
  + Alessandro Nicolini: 40 hours
* Design Document
  + Giuseppe Manzi: 30 hours
  + Alessandro Nicolini: 30 hours
* Inspection and Test Plan Document:
  + Giuseppe Manzi: 9 hours
  + Alessandro Nicolini: 9 hours
* Project Reporting:
  + Giuseppe Manzi: 10 hours
  + Alessandro Nicolini: 10 hours

The total hours of work during all phases of the project are 178 hours.

*178 hours / (40\*4) hours = 1,12 Person / Months*

Under the assumption that one person can work 40 hours per week.

# 6. Risk

For the project, their relevance and the associated recovery